

REMARKS

The Official Action mailed December 16, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on February 26, 2002; and April 4, 2005.

Claims 11-26 are pending in the present application, of which claims 11, 12 and 15-20 are independent. Each of the independent claims has been amended to better recite the features of the present invention. Also, claims 15, 16, 19 and 20 have been amended for clarity; specifically, these claims have been amended to define Id as "a dark current flowing in the photoelectric conversion element," which is supported in the present specification, for example, at page 33. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph of 3 of the Official Action objects to claim 20 regarding a lack of antecedent basis for "first image signal." In response, claim 20 has been amended to recite "obtaining a first image signal of each of the plurality of pixels by using the photoelectric conversion element." Reconsideration is requested.

Paragraphs 4-6 of the Official Action reject claims 11-26 as obvious based on the combination of U.S. Patent No. 5,886,353 to Spivey et al., U.S. Patent No. 5,420,703 to Sakai et al. and/or U.S. Patent No. 4,562,473 to Levine. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference

teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 11, 12 and 15-20 have been amended to recite "a pixel portion having a plurality of pixels each comprising a photoelectric conversion element and a light emitting element," which is supported in the present specification, for example, by Embodiment 3 and Figures 7 and 8. For the reasons provided below, Spivey, Sakai and/or Levine, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

Spivey discloses a pixel circuit 11 comprising an electrode 14, transistors 26, 30, 41 and a capacitor 24 in Figures 9-12 (Figure 9 reproduced below).

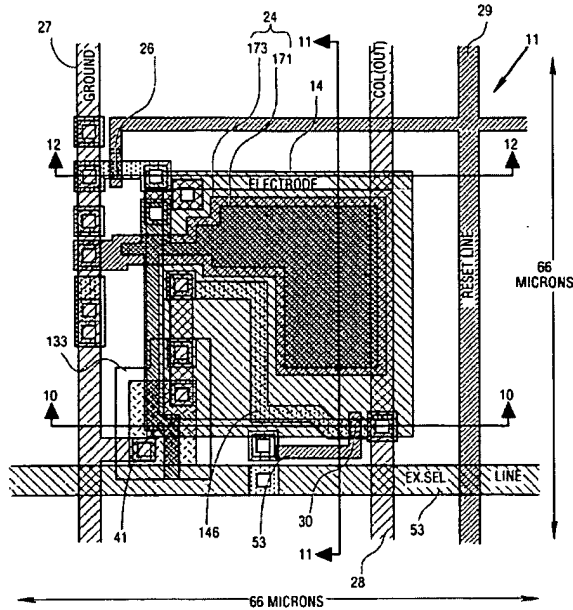
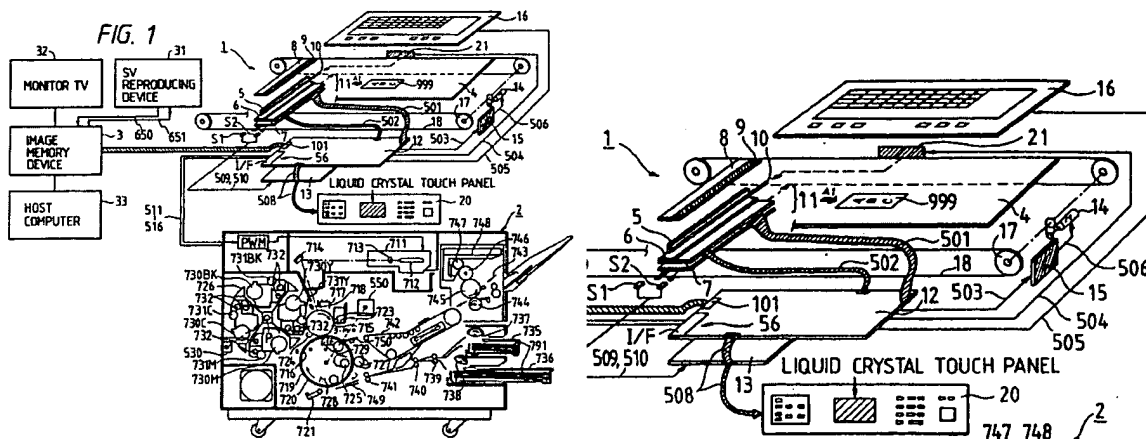


FIG. 9

However, the pixel circuit 11 of Spivey does not include a light emitting element.

Sakai discloses an image reading device 1 in Figure 1 (reproduced below at left, a portion of which is enlarged at right).



However, the image reading device 1 of Sakai does not include a light emitting element.


The diagram illustrates a video camera system designed to suppress dark current. The central component is the **FIELD TRANSFER CCD IMAGER 10**, which contains an **A REGISTER 11**, a **B REGISTER 12**, and a **C REGISTER 13**. The **C REGISTER 13** has two outputs, **14** and **15**. A **CLOCKING GENERATOR 20** provides timing signals to the registers and the imager. The output of the **C REGISTER 13** (line 14) is connected to a **WAVEFORM SHAPER 15**, which produces a **RESET TO ZERO EACH FIELD RETRACE** signal (line 18) sent to the **THERMOELECTRIC COOLER 16**. The output of the **WAVEFORM SHAPER 15** (line 15) is also connected to a **GATE-SELECT DURING PORTION OF FIELD RETRACE C REG. 13 IS CLEAR OF B REGISTER INPUT.** block (line 22). This block's output goes to an **INTEGRATOR 21**, which also receives the **RESET TO ZERO EACH FIELD RETRACE** signal. The **INTEGRATOR 21** outputs a **STAIRCASE OR RAMP GENERATOR 17** (line 19). The **STAIRCASE OR RAMP GENERATOR 17** produces a **DARK-CURRENT SUPPRESSION SIGNAL** (line 17) that is combined with the output of the **WAVEFORM SHAPER 15** (line 15) at a summing junction (line 16) to produce the final **OUTPUT VIDEO SIGNAL WITH DARK-CURRENT FIELD SHADING SUPPRESSED THEREFROM.**

Therefore, Spivey, Sakai and/or Levine do not teach or suggest a pixel portion having a plurality of pixels each comprising a photoelectric conversion element and a light emitting element.

Since Spivey, Sakai and/or Levine do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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